

19-7538

Container No: S113510
Part: 647.1611
Job No: 181415
Serial No/Batch: S113510

Revision:
Inspector:
Exp Date:
Instructions:

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada
Tel (613) 632-5200
Fax 613 632-5246

647.1611
Job Sheet 181415

Date: 08/28/18

Job Qty: 50 ea



Part Weight: 0 lbs

Job Created: 7/26/18

Due Date: 9/10/18

Type: Stock

Note: DWG REV A SHEETS 3,4 IPP REV A NEW ISSUE VERIFIED BY DD

Ship Via:

Status: Scheduled

Priority: Medium

Job Tracking No:

Created By: Marie Lajeunesse

Description:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard Setup hrs	Run Hrs	Workcenter/Supplier	Lead Time	Sign-off
90	Start up Operation	50 Ea	9/10/18	9/10/18	0.00	0.00	Start Up Machining-1		
100	Bandsaw	50 pcs	9/10/18	9/10/18	0.00	0.04	Bandsaw1		
110	CNC Vertical Machining	50 pcs	9/10/18	9/10/18	0.43	57.74	HAAS1-1		
120	QC	50 pcs	9/10/18	9/10/18	0.00	0.00	QC2 Machining-1		
130	QC	50 pcs	9/10/18	9/10/18	0.00	0.00	QC8 Machining-1		
140	Outsource	50 pcs	9/10/18	9/10/18	0.00	0.00	Outsource4		
150	Packaging	50 pcs	9/10/18	9/10/18	0.00	0.00	Packaging2		
155	QC	50 pcs	9/10/18	9/10/18	0.00	0.00	QC5		
180	Packaging	50 pcs	9/10/18	9/10/18	0.00	0.00	Packaging3-1		
190	QC21-SA	50 Ea	9/10/18	9/10/18	0.00	0.00	QC21		

Part Op 100 - Cut Blanks at 6.00"

Descriptions: 110 - 1-Machine per folio FB287

140 - Issue P/O to ATG

180 - ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
647.1611E	Wiper Deflector	25 Ea (.5 ea)	90-Start up Operation	91744

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	647.1611E	25	110	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Wiper Deflector, Aft	0.320inches ± 0.010	0.330 0.310	0.320	
2	Wiper Deflector, Aft	5.770inches ± 0.010	5.780 5.760	5.770	
3	Wiper Deflector, Aft	2.420inches ± 0.010	2.430 2.410	2.421	
4	Wiper Deflector, Aft	0.360inches ± 0.010	0.370	0.362	

			0.350	
5	Wiper Deflector, Aft	1.560inches $\pm$ 0.010	1.570 1.550	1.557
6	Wiper Deflector, Aft	0.404inches $\pm$ 0.005	0.409 0.399	0.405
7	Wiper Deflector, Aft	3.967inches $\pm$ 0.002	3.969 3.965	3.967
8	Wiper Deflector, Aft	0.433inches $\pm$ 0.005	0.438 0.428	Diameter 0.433
9	Wiper Deflector, Aft	0.146inches $\pm$ 0.005	0.151 0.141	Depth 0.146
10	Wiper Deflector, Aft	0.217inches + 0.005 - 0.001	0.222 0.216	Diameter 0.218
11	Wiper Deflector, Aft	0.365inches $\pm$ 0.005	0.370 0.360	0.366
12	Wiper Deflector, Aft	1.385inches $\pm$ 0.002	1.387 1.383	1.385
13	Wiper Deflector, Aft	2.160inches $\pm$ 0.010	2.170 2.150	2.163
14	Wiper Deflector, Aft	0.350inches $\pm$ 0.010	0.360 0.340	0.351
15	Wiper Deflector, Aft	0.200inches $\pm$ 0.010	0.210 0.190	0.205
16	Wiper Deflector, Aft	0.944inches $\pm$ 0.005	0.949 0.939	0.941
17	Wiper Deflector, Aft	0.606inches $\pm$ 0.002	0.608 0.604	0.605
18	Wiper Deflector, Aft	0.381inches $\pm$ 0.002	0.383 0.379	0.380
19	Wiper Deflector, Aft	3.310inches $\pm$ 0.010	3.320 3.300	3.311
20	Wiper Deflector, Aft	0.713inches $\pm$ 0.002	0.715 0.711	0.713
21	Wiper Deflector, Aft	1.445inches $\pm$ 0.002	1.447 1.443	1.444
22	Wiper Deflector, Aft	0.540inches $\pm$ 0.010	0.550 0.530	0.534
23	Wiper Deflector, Aft	0.150inches $\pm$ 0.010	0.160 0.140	Diameter 0.155
24	Wiper Deflector, Aft	62.700Degrees $\pm$ 0.500	63.200 62.200	Angle 62.70
25	Wiper Deflector, Aft	0.170inches + 0.005 - 0.001	0.175 0.169	Diameter ϕ 0.170
26	Wiper Deflector, Aft	0.200inches $\pm$ 0.010	0.210 0.190	Radius 0.200
27	Wiper Deflector, Aft	4.880inches $\pm$ 0.010	4.890 4.870	4.884
28	Wiper Deflector, Aft	3.890inches $\pm$ 0.010	3.900 3.880	3.894

Plex 7/26/18 8:30 AM Dart.lajeunesse.marie

DAS
52
9-89

18/09/21



Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	181400	647.7814	Fwd Bracket Issue P/O to ATG : Hard Black Anodize and Prime as per Dwg. 647.7800 Rev. A	Firmed	-	10/25/18	50 pcs	0 pcs	50 pcs	\$7.85/pcs	\$392.50
						50 X OCT 11 2018					
2	181408	647.7817	Aft Bracket Issue P/O to ATG : Hard Black Anodize and Prime as per Dwg. 647.7800 Rev. A	Firmed	-	10/25/18	50 pcs	0 pcs	50 pcs	\$7.85/pcs	\$392.50
						50 X OCT 11 2018					
3	181415	647.1611	Wiper Deflector, Aft Issue P/O to ATG :	Firmed	-	10/25/18	48 pcs	0 pcs	48 pcs	\$11.70/pcs	\$561.60
						48 X OCT 29 2018					
Grand Total:										\$1,346.60	



PURCHASE ORDER
PO041165

Order Notes

And Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit

Plex 10/4/18 1:46 PM dart.beecraft.ashley



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO041165

Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 10/4/18 1:46 PM dart.beecraft.ashley



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 916364

Date: 29-Oct-18

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chrisoula Tsimiklis
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		ATG Delivery	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
✓ 48 ea	Part: 647.1611 ✓ Wiper Deflector, Aft Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils). Job: 23874	Rev: A	PO: PO041165 ✓ Line: 3
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: <u>29/10/18</u> Certified Signature: <u>[Signature]</u> Receiver Signature: _____ A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			
Made in Canada.			

DQA:

2R

Date:

Oct 24/19

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed:

Date:

Work Order update only ☐

Work Order: <u>18141X</u> Part No. <u>647.1611</u> NCR No. <u>19-7538</u>		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☒</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																			
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																								
Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																								
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																								
Large Fab ☐	Composite ☐	Supplier ☐																																																																									
Date: <u>18/09/25</u>		Step #: <u>2 and 3</u>		QTY Effective: <u>2 48</u>		MRB (QSI042) Approval <u>[Signature]</u> 18-09-25																																																																					
Description Work Order Deviation 1 Piece of extrusion was warped Resulting in - out of tolerance machining 1 Tool was too short (damaged work)				Disposition <u>SCRAP</u>				Completed By <u>S.C.</u> <u>18/09/25</u>																																																																			
								Lead hand / Supervisor Approval Verification <u>[Signature]</u> 18/09/25																																																																			
								QC / QA Coordinator Approval <u>DAS 55</u> <u>9-89</u> 18/09/25																																																																			
Root Cause <table style="width:100%;"> <tr> <td>Environment ☐</td> <td>No Re-verification ☐</td> <td>Pressure/Forced ☐</td> </tr> <tr> <td>Design ☐</td> <td>Operator ☒</td> <td>Bending ☐</td> </tr> <tr> <td>Doc/Data ☐</td> <td>Offset/Setup ☐</td> <td>Centre Not Concentric ☐</td> </tr> <tr> <td>Equip/Tooling ☐</td> <td>Supplier ☐</td> <td>Cracks ☐</td> </tr> <tr> <td>Handling/Pre ☐</td> <td>Training ☐</td> <td>Crimp/Kink/Ripple/Wave ☐</td> </tr> <tr> <td>Material ☒</td> <td>Use for Testing ☐</td> <td>Cuffs ☐</td> </tr> <tr> <td>Internal Transport ☐</td> <td>Poor Information ☐</td> <td>Crushing ☐</td> </tr> <tr> <td>Tribal Knowledge ☐</td> <td>Rushing ☐</td> <td>Heat Treat ☐</td> </tr> <tr> <td>LOA ☐</td> <td>Product Improvement ☐</td> <td>Wave/Twist in Tube <u>Extrusion</u> ☒</td> </tr> <tr> <td>Substation ☐</td> <td>Process Improvement ☐</td> <td>Marks/Chatter ☐</td> </tr> <tr> <td>Past Expiry Date ☐</td> <td>Manufacturing Process ☐</td> <td></td> </tr> <tr> <td>Misidentified ☐</td> <td>Past Due ☐</td> <td>OTHER: ☐</td> </tr> </table>				Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Design ☐	Operator ☒	Bending ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Material ☒	Use for Testing ☐	Cuffs ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube <u>Extrusion</u> ☒	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Past Expiry Date ☐	Manufacturing Process ☐		Misidentified ☐	Past Due ☐	OTHER: ☐	FAULT CATEGORY <table style="width:100%;"> <tr> <td>Temperature/Cure ☐</td> <td>Power Loss/Surge ☐</td> <td>Positioned Wrong ☐</td> </tr> <tr> <td>Set-up ☒</td> <td>Folio/Program ☐</td> <td>Outside Dimensions ☐</td> </tr> <tr> <td>BOM/Route ☐</td> <td>Grain ☐</td> <td>Over/Under tolerance ☐</td> </tr> <tr> <td>Broken/Damage/Defect ☐</td> <td>Weld ☐</td> <td>Part Incorrect ☐</td> </tr> <tr> <td>Inspection Incomplete/Unqualified ☐</td> <td>Wrong Stock Pulled ☐</td> <td>Part Lost/Missing ☐</td> </tr> <tr> <td>Contamination ☐</td> <td>Out of Sequence ☐</td> <td>Part Moved ☐</td> </tr> <tr> <td>Countersink ☐</td> <td>Off-set ☐</td> <td>Drawing ☐</td> </tr> <tr> <td>Cut Too Short ☐</td> <td>Mislabeled ☐</td> <td>Finish ☐</td> </tr> <tr> <td>Instructions Incomplete/Unclear ☐</td> <td>Fit/Function ☐</td> <td>Misread ☐</td> </tr> <tr> <td>Drill Holes ☐</td> <td>Misaligned/off center ☐</td> <td>Turning Sequence ☐</td> </tr> </table>						Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Set-up ☒	Folio/Program ☐	Outside Dimensions ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Countersink ☐	Off-set ☐	Drawing ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐	Pressure/Forced ☐																																																																									
Design ☐	Operator ☒	Bending ☐																																																																									
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐																																																																									
Equip/Tooling ☐	Supplier ☐	Cracks ☐																																																																									
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐																																																																									
Material ☒	Use for Testing ☐	Cuffs ☐																																																																									
Internal Transport ☐	Poor Information ☐	Crushing ☐																																																																									
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐																																																																									
LOA ☐	Product Improvement ☐	Wave/Twist in Tube <u>Extrusion</u> ☒																																																																									
Substation ☐	Process Improvement ☐	Marks/Chatter ☐																																																																									
Past Expiry Date ☐	Manufacturing Process ☐																																																																										
Misidentified ☐	Past Due ☐	OTHER: ☐																																																																									
Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																									
Set-up ☒	Folio/Program ☐	Outside Dimensions ☐																																																																									
BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																									
Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																									
Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																									
Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																									
Countersink ☐	Off-set ☐	Drawing ☐																																																																									
Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																									
Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																									
Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																									